

SECTION 3.10: CULTURAL RESOURCES

This section discusses the potential effects that the alternatives considered in Chapter 2 would have on cultural resources in the DMC Unit.

AFFECTED ENVIRONMENT

Renewal of the long-term water service contracts between Reclamation and the 20 DMC Unit contractors constitutes an “undertaking” under federal definitions. Therefore, potential impacts to cultural resources are being considered in this EA in compliance with a number of federal rules and regulations, as discussed below under Regulatory Setting.

For cultural resources, the area of potential effect of the undertaking consists of the contract service areas of the 20 DMC Unit contractors. The district service areas, which are previously described in Section 3.1, Contractor Service Area Descriptions, incorporate extensive areas along the western portion of the San Joaquin Valley and the interface between the valley and the lower reaches (eastern margin) of the Diablo Range.

The remainder of this section details the potential effects of the undertaking to cultural resources that are considered eligible or potentially eligible for inclusion on the National Register of Historic Places (NRHP) and that are located or may be present within the contract service areas of the 20 DMC Unit contractors. Included at the end of this section are recommendations for actions that the DMC Unit contractors should take and that, if adopted, will ensure that any effects of the undertaking are reduced to less than adverse levels.

INFORMATION SOURCES AND BACKGROUND DATA FOR AFFECTED ENVIRONMENT

This section provides a brief overview of environmental, prehistoric, ethnographic, and historic contexts for the area encompassed by the DMC Unit. Much of this background information has been derived from anthropological, archaeological, and historical studies conducted over the past several decades on both public and private lands within the service areas of the 20 DMC Unit contractors. Also discussed are the types of cultural resources known or suspected of being present within these service areas.

In order to secure information concerning the types and general distribution of known archaeological and historical sites and to estimate whether additional sites may remain undiscovered within individual district lands, the following sources were consulted:

- A search of archaeological survey, site, and other records and documents maintained by the California Historical Resources Information System, Central

California Information Center (CSU-Stanislaus), and the Southern San Joaquin Valley Information Center (CSU-Bakersfield).

- A review of selected published and unpublished archaeological, ethnographic, and historical reports and documents available for the overall project area.
- A review of the NRHP.
- The California Register of Historical Resources.
- The California Inventory of Historic Resources (1976).
- The California Historical Landmarks (1996).
- The California Points of Historical Interest listing (May 1992 and updates).
- The Historic Property Data File (Office of Historic Preservation current list).
- The CALTRANS Local Bridge Survey (1989).
- The Survey of Surveys (1989).

The background research and records searches were undertaken in September 2000, with specific results summarized below under Natural Environmental Context, Cultural Environmental Context, and Current Inventory of Cultural Resources.

NATURAL ENVIRONMENTAL CONTEXT

The service areas of the 20 DMC Unit contractors include primarily valley and lower foothill lands located within the central and southern San Joaquin Valley, along the western margin of the valley at the interface of the valley and the lower reaches of the Diablo Range.

This area contains a variety, but a limited number of water sources and resource zones. Prehistoric use and occupation focused on these features, particularly around the confluences of streams and within the ecotones created at the interface of foothill/valley lands. Drainages and associated natural levees and benches were moderately to intensively utilized, while uplands were visited for oak and other resources on a more seasonal basis.

Much of this area has been affected by ranching for over 100 years and by agriculture during the past 50 to 100 years. The most recent impacts derive primarily from the construction of water distribution facilities, major transportation routes (Interstate 5 in particular), and agricultural equipment and storage buildings.

PREHISTORIC CONTEXT

The CVPIA project area, inclusive of the area of potential effect, has a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years. The first generally agreed-upon evidence for the presence of prehistoric peoples in the CVPIA area is represented by the distinctive fluted spear points, termed Clovis points, found on the margins of extinct lakes in the San Joaquin Valley. The Clovis points are found on the same surface with the bones of extinct animals such as mammoths, sloths, and camels. Based on evidence from elsewhere, the ancient hunters who used these spear points existed during a narrow time range of 10,900 BP to 11,200 BP.

The next cultural period represented, the Western Pluvial Lakes Tradition, thought by most to be after the Clovis period, is another widespread complex that is characterized by stemmed spear points. This poorly defined early cultural tradition is regionally known from a small number of sites in the Central Coast Range, San Joaquin Valley lake margins, and Sierra Nevada foothills. The cultural tradition is dated to between 8,000 and 10,000 years ago and its practitioners may be the precursors to the subsequent cultural pattern.

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to seed gathering, as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace 1954, 1978), but recent studies suggest that the horizon may be more widespread than originally described and is found throughout the CVPIA area. Radiocarbon dates associated with this period vary between 8,000 and 2,000 BP, although most cluster in the 6,000 to 4,000 BP range (Basgall and True 1985).

Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, became codified within the last 3,000 years. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and populations expanded. Many sites dating to this time period contain mortars and pestles and/or are associated with bedrock mortars, implying the intense exploitation of the acorn. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. Along the coast and in the Central Valley, archeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items. Ethnographic lifeways serve as good analogs for this period.

ETHNOGRAPHIC CONTEXT

As noted above, the service areas of the 20 DMC Unit contractors are nearly coterminous with lands claimed by the Penutian-speaking Northern Valley Yokuts at the time of their initial contact with European-American populations, circa AD 1850 (Kroeber 1925; Wallace 1978). These Yokuts occupied an area extending from the crest of the Coast Diablo Range easterly into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River.

The basic social unit for the Yokuts was the family, although the village may also be considered a social, as well as a political and economic unit. Often located on flats adjoining streams, villages were inhabited mainly in the winter because it was necessary to go out into the hills and higher elevation zones to establish temporary camps during food-gathering seasons (i.e., spring, summer, and fall). Villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, with from 12 to 15 or more houses, might also contain an earth lodge.

As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing, and collecting plants, with deer, acorns, and avian and aquatic resources representing primary staples. The Yokuts used a wide variety of wooden, bone, and stone artifacts to collect and process their food. The Yokuts were very knowledgeable of the uses of local animals and plants and the availability of raw materials that could be used to manufacture an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Resource Considerations, Native American Sites

The discussion of regional prehistory and ethnography provides insight into the types of Native American sites already known or likely to be present within the service areas of the 20 DMC Unit contractors, with the most frequently occurring types including the following:

- Large village sites located along the margins of all permanent streams, particularly at confluences, and other natural surface water sources (springs, marshes, and other wetlands). Additional large village sites have been documented along smaller stream courses, especially where streams merge, and particularly at the interface between major ecotones.

- Surface scatters of lithic artifacts without buried cultural deposits, resulting from short-term occupation and/or specialized economic activities.
- Petroglyphs, often in the form of cupped boulders, at or close to village sites or encampments.
- Bedrock food-processing (milling) stations, including mortar holes and metate slicks.
- Trails, often associated with migratory game animals.
- Mortuary sites, often but not exclusively associated with large village complexes.
- Isolated finds of aboriginal artifacts and flakes.

HISTORIC CONTEXT

Interior California was initially visited by Anglo-American fur trappers, Russian scientists, and Spanish-Mexican expeditions during the early part of the nineteenth century. These early explorations were followed by a rapid escalation of European-American activities, which culminated in the massive influx fostered by the discovery of gold at Coloma in 1848. The influx of miners and others during the Gold Rush set in motion a series of major changes to the natural and cultural landscape of California that would never be reversed.

Early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley (Cook 1976). By the mid-1820s, hundreds of fur trappers were annually traversing the valley on behalf of the Hudson's Bay Company (Maloney 1945). By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including ranchos in the interior Coast Range.

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics, and Chinese arrived in and traveled through the general project area. The mining communities' demand for hard commodities led quickly to the expansion of ranching and agriculture throughout the valley and logging within the foothill and higher elevation zones of the Sierra Nevada. Stable, larger populations arose and permanent communities slowly emerged in the Central Valley at this time, particularly along major transportation corridors. Of particular importance was the transformation brought about by construction of railroad lines.

The Southern Pacific and Central Pacific Railroads and a host of smaller interurban lines to the north around the City of Stockton began intensive projects in the late 1860s. By the turn of the century, nearly 3,000 miles of lines connected the cities of Modesto and Stockton with points south and north. Many of the valley's larger cities, including many in San Joaquin County and adjacent counties, were laid out as isolated railroad towns in the 1870s and 1880s by the Southern Pacific, which not only built and settled, but continued to nurture the infant cities until settlement was successful. The Southern Pacific main line proceeds through or adjacent to the entire project area.

Intensive agricultural development soon followed, since railroads provided the means for product to be transported to a much larger market. Agricultural land conversion began long before the development of water supply projects. By the end of the twentieth century, a substantial portion of the valley was being intensively cultivated, with increasing mechanization through all of the twentieth century and substantial expansion of cultivated acreage with the arrival of water from the CVP.

Resource Considerations, Historic Resources

Historic overviews for the region generally document the presence of a wide range of historic site and feature types and complexes, with types known or most likely to be present with the project area including the following:

- Historic railroad alignments.
- Two-track historic trails/wagon roads and now-paved historic road corridors.
- Water distribution systems, including levees and small and large ditch, canal, and channel systems.
- Occupation sites or homesteads and associated features such as refuse disposal sites, privy pits, barns, and sheds.
- Commercial undertakings.
- Refuse disposal site(s) associated with early communities.
- Ranch features, including standing structures, structural remnants, stock ponds, and corrals.

CURRENT INVENTORY OF CULTURAL RESOURCES

A total of 89 archaeological and historic sites are currently documented within the service areas of the 20 DMC Unit contractors. These include sites that contain exclusively prehistoric material, sites with only historic material, and sites with mixed prehistoric and historic components and structures.

Prehistoric sites are represented by large habitation areas (village sites) in which both habitation and special-use activity areas are represented; mortuary sites, usually associated with habitation sites; specialized food-procurement and food-processing sites including milling areas; and other site types representing a variety of specialized activities.

Historic sites are represented by a range of types, including buildings and structures dating to the nineteenth century; historic transportation features; water distribution systems; occupation sites and homesteads with associated features such as refuse disposal sites, privy pits, barns, and sheds; historic disposal sites associated with historic communities; and ranch complexes.

Some of these prehistoric and historic sites have been determined eligible for inclusion on the NRHP through consultation between a federal agency and the State Historic Preservation Office. Others remain unevaluated in relation to NRHP eligibility criteria.

In addition to formally recorded sites, it is clear that a large number of both prehistoric and historic sites remain undiscovered within the overall project area simply because for many areas, especially undeveloped ranch and farm lands, a formal archaeological inventory survey has never been undertaken.

Table 3.10-1 summarizes the current cultural resources inventory by DMC Unit contractor. The table also provides information concerning the cultural resource inventory within each district, as follows:

- The number of documented archaeological and historic sites that have been assigned State Trinomials, Primary Record, or State Landmark designations.
- An estimate of the land area within the district that has been surveyed for cultural resources.
- A conclusion as to whether district lands are known to contain or, if subjected to formal archaeological survey, would be likely to be discovered to contain important prehistoric or historic sites or other cultural features. This conclusion or assessment is based on (a) the results of the formal records search, (b) previous

consultation with Native American groups and historic societies as summarized in existing documents, (c) the results of prior surveys in the general or immediate vicinity, and (d) an assessment of archaeological sensitivity based on stream courses and other critical variables present within unsurveyed district lands.

**Table 3.10-1
Summary of Previous Studies and Cultural Properties**

Entity Name	Recorded Sites and Landmarks	Percentage Surveyed to Date	Are Undocumented Sites Likely To Be Present in District?
The West Side Irrigation District	7	30%	Yes
Plain View Water District	6	60%	Yes
City of Tracy	15	20%	Yes
Banta-Carbona Irrigation District	5	10%	Yes
West Stanislaus Irrigation District	3	1%	Yes
Patterson Water District	3	5%	Yes
Del Puerto Water District	22	35%	Yes
Centinella Water District	0	20%	Yes
Laguna Water District	0	0%	Yes
Eagle Field Water District	0	0%	Yes
Oro Loma Water District	0	0%	Yes
Mercy Springs Water District	0	0%	Yes
Widren Water District	0	1%	Yes
Broadview Water District	0	0%	Yes
Coelho Family Trust*	1	1%	Yes
Reclamation District #1606*	1	1%	Yes
Fresno Slough Water District	0	0%	Yes
Tranquillity Irrigation District*	1	2%	Yes
Tranquillity Public Utilities District	25	3%	Yes
James Irrigation District	0	25%	Yes
Total	89		
*District contains no sites with State Trinomial or number designations, but contains one State Historic Landmark herein counted as a "site."			

ISSUES IDENTIFIED

The primary issues involving cultural resources include (a) what types of archaeological and historic sites are present within the service areas for the 20 DMC Unit contractors that could be affected by the undertaking, (b) what is the basis for determining the significance or importance of identified sites, (c) what effects might the undertaking have on important or significant sites located within the project areas, and (d) what steps might be taken to avoid, minimize, or mitigate any adverse impacts to such significant sites.

The identification of archaeological sites was resolved through (a) an evaluation of records and documents, including archaeological survey reports and archaeological site documents on file at California Historical Resources Information Centers and elsewhere, (b) archaeological and historic overview of the project area, and (c) the results of previous consultations with Native American groups and historical societies as documented in reports and files at the California Information Centers.

The significance or importance of archaeological sites located within the service areas for the 20 DMC Unit contractors has been addressed by using established procedures outlined in 36 CFR 60.4 and discussed below.

The final cultural resource issue revolves around possible impacts to archaeological and historic sites that might be determined eligible or potentially eligible for listing on the NRHP and how best to minimize or reduce such possible impacts to less than adverse levels. These issues are discussed below under Potential Effects of the Undertaking to Cultural Resources and under Mitigation Measures.

REGULATORY SETTING

Evaluation of the potential impacts of an undertaking to archaeological and historic sites must conform with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800), Section 2(b) of Executive Order 11593, Section 101(b)(4) of NEPA, the Archaeological Resources Protection Act, the Native American Grave Protection and Repatriation Act of 1990 (if federal lands are involved), and other rules and regulations, including applicable state laws (especially, the CEQA Guidelines, as amended in October 1998). Reclamation is responsible for ensuring compliance with the federal laws, rules, and regulations.

ENVIRONMENTAL CONSEQUENCES

The objectives of this section are (a) to describe the basis for determining which cultural resources located within the service areas for the 20 DMC Unit contractors have been included, are considered potentially eligible for inclusion, or might be found to be eligible for inclusion on the NRHP and whether additional such resources may remain undiscovered within the service areas, (b) to identify and assess the potential effect of the project on eligible or potentially eligible or significant cultural resources, and (c) to outline appropriate measures that can be taken to avoid, minimize, or mitigate adverse impacts to any eligible cultural properties that could be affected by the undertaking.

SIGNIFICANCE OR IMPORTANCE OF CULTURAL RESOURCES

According to federal regulations and guidelines, significant or important cultural resources are those prehistoric and historic sites, districts, buildings, structures, and objects, as well as properties with traditional religious or cultural importance to Native Americans, that are listed or are eligible for listing on the NRHP (historic properties), according to the criteria outlined in 36 CFR 60.4. Historic properties must possess integrity of location, design, workmanship, feeling, and association and must meet at least one of the following criteria:

- Associated with events that have made significant contributions to the broad patterns of United States history.
- Associated with the lives of people significant in United States history.
- Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction.
- Has yielded or is likely to yield information important in prehistory or history.

Archaeological sites with “cultural” or traditional value are evaluated under guidelines prepared by the Advisory Council on Historic Preservation (Advisory Council on Historic Preservation 1985). The guidelines define *cultural value* as “... the contribution made by an historic property to an on-going society or cultural system. A traditional cultural value is a cultural value that has historical depth.” The guidelines further specify that “... [a] property need not have been in consistent use since antiquity by a cultural system in order to have traditional cultural value.”

As noted above, although numerous archaeological and historic sites have been documented within the service areas for the 20 DMC Unit contractors, not all of them have been evaluated for NRHP eligibility. As well, intensive-level pedestrian surveys have been undertaken within only a portion of the overall service areas.

POTENTIAL EFFECTS OF THE UNDERTAKING TO CULTURAL RESOURCES

Impacts to archaeological and historic sites occur from activities affecting the characteristics that qualify a property for inclusion on the NRHP. The criteria for assessing effects are available in the Advisory Council on Historic Preservation’s Regulations for the Protection of Historic Properties at 36 CFR 800.9. Significant impacts are those considered to have an adverse effect on historic properties. Adverse effects may include, but are not limited to:

- Physical destruction, damage, or alteration of all or part of a historic property.
- Isolation of a historic property or alteration of the character of its setting when that character contributes to the property’s eligibility for the NRHP or its cultural significance.
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting.

Important archaeological sites within the project area include documented and undocumented prehistoric and historic sites and features, some of which may contain subsurface (buried) accumulations of cultural material.

Virtually all of the actions associated with the renewal of long-term water service contracts are within the range of “existing conditions” with respect to land use. Currently, most of the lands within the contractors’ boundaries are being farmed, an activity that has been ongoing for decades. There are presently no specific plans to modify or substantially alter current land use within contract service areas on the basis of long-term water service contract renewals. Specifically, contract renewals will not alter the area of use, types of use, range of river flows, or reservoir fluctuations. No additional infrastructure will be constructed, there will be no increase in deliveries, and there will be no conversion of natural habitat into farmland or other uses.

Future needs could possibly result in proposals by one or more districts to (1) bring new lands into irrigation and/or incorporate new land into district boundaries (inclusions) or (2) substantially alter current land uses within district boundaries. Reclamation would need to consider the effects of either one of the above to historic properties for actions it approves. The measures discussed below are designed to ensure that these actions, which could affect historic properties, comply with requirements under Section 106 of the National Historic Preservation Act and other relevant federal rules and regulations.

NO-ACTION ALTERNATIVE

As indicated above, long-term water service contract renewal itself will not result in impacts to eligible or potentially eligible prehistoric or historic sites or districts within the service areas for the 20 DMC Unit contractors. Land use changes, including the addition of lands to districts or the conversion of land from agricultural to M&I use, are made at the local level, according to California land use planning law and as described further in Section 3.4, Land Use. There are no plans at the federal level to either add lands to districts or to effect land use conversions through the long-term water service contract renewal process.

It is possible that one or more of the contracted districts could petition Reclamation to expand agricultural activities served by contracted water within district lands or to substantially alter land use within the district utilizing available contracted water. Under these circumstances, Reclamation would comply with Section 106 of the National Historic Preservation Act and other rules and regulations governing effects or potential effects of new undertakings to cultural resources determined or considered potentially eligible for inclusion on the NRHP.

ALTERNATIVE 1

Similar to the discussion above for the No-Action Alternative, Alternative 1 would not result in impacts to eligible or potentially eligible prehistoric or historic sites or districts within the service areas for the 20 DMC Unit contractors. There are no plans at the federal level to either add lands to districts or to effect land use conversions through the long-term water service contract renewal process that could result in an impact to these resources. Therefore, Alternative 1 would not result in adverse impacts to cultural resources.

ALTERNATIVE 2

Similar to the discussion above for the No-Action Alternative, Alternative 2 would not result in impacts to eligible or potentially eligible prehistoric or historic sites or districts within the service areas for the 20 DMC Unit contractors. There are no plans at the federal level to either add lands to districts or to effect land use conversions through the long-term water service contract renewal process that could result in an impact to these resources. Therefore, Alternative 2 would not result in adverse impacts to cultural resources.

EFFECTS NOT FOUND TO BE SIGNIFICANT

To date, while archaeological and historical sites have been documented within district lands comprising the DMC Unit, continuation of current land uses is not considered adverse, and no specific mitigation measures are necessary. For substantial land use changes involving federally contracted water, the required Section 106 consultation would consider potential effects to eligible historic properties pursuant to relevant federal law, rules, and regulations.

CUMULATIVE IMPACTS

Long-term contract renewals, when added to other past, present, and reasonably foreseeable future actions, will not result in impacts to cultural resources. The contracts call for the delivery of the same quantities of water to the same lands, with no additional facility modifications or construction that could directly or indirectly lead to physical impacts to cultural resources.